Xperia™ U

ST25i, ST25a

XPERIA

White paper
April 2012

SONY
make.believe

Purpose of this document

Sony mobile product White papers are intended to give an overview of a product and provide details in relevant areas of technology.

Document history

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Sony Developer World

For the latest technical documentation and development tools, go to *www.sonymobile.com/developer.*

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Table of contents

Product overview **2**
Sony Xperia™ U – Powerful and personal 2
Signature features 4
Facts – dimensions, weight, performance and networks 5
Categorised feature list 7

Technologies in detail **9**
Device-to-device communications (local) 9
Bluetooth™ wireless technology 9
Wi-Fi® 10
DLNA Certified® (Digital Living Network Alliance) 11
Messaging 12
MMS (Multimedia Messaging Service) 12
Email 12
Positioning – location based services 13
Provisioning (OMA CP) 13
Multimedia (audio, image and video) 14
Synchronisation (OMA DS, EAS, Google Sync™) 15
Web browser 16
Trademarks and acknowledgements 17

Product overview

Sony Xperia™ U – Powerful and personal

Get yourself a front row seat. Enjoy the sights and sounds of your favourite films and music bombarding your senses. On Xperia™ U's razor sharp Reality Display, and in 3D surround sound. Snap photos fast, film videos in super-sharp HD, and share them with your friends in a flash. Enjoy it all with super quick performance powered by a dual core processor. Let the true you shine through with super snazzy coloured bottom caps and a transparent band that changes colour to suit your themes, photos and album art.

Made for movies

Watch every moment from every movie in crystal clear colours. See every smile from last year's party in true detail. Sheer video magic on the 3.5" Reality Display with Mobile BRAVIA® Engine. And with a dual-core processor at its heart, you'll enjoy super-fast performance whether surfing the web or enjoying the latest Hollywood blockbusters from Sony Entertainment Network.

Don't miss the hit

Watching volleyball on the beach? Capture the smash, not the sand. Fire up the camera. Fire off the shots. From sleep to snap in just over a second. And with 5 megapixels and face detection you'll shoot that winning smile. Fancy something more moving? Why not film the whole tournament in razor sharp high definition?

Live the sound

Start your own sing-a-long. Download that summer playlist. Enjoy it all in crisp and loud sound with xLoud and 3D surround sound Sony audio technology. Plug in your earphones, sit back and listen, as the deep bases and high trebles shoot around your head.

Add some shine to your life

Watch the transparent band light up your life. It reflects your favourite artists' album arts with matching colours when you browse through your music, and changes to match the shades in your photos. Or why not choose a theme that matches the exchangeable cap? Then you'll see the transparent band light up in the same colour when you receive a call.

Sony Entertainment Network[1]. Your ultimate source for digital entertainment

Feasts for film fans, masses of music. Enjoy a catalogue with millions and millions[2] of songs from Music Unlimited. Or download your favourite hit movies from Video Unlimited. It's all on Sony Entertainment Network. No trips to the store. No late fees. Just pure entertainment. The best tracks from Music Unlimited. The latest movies from Video Unlimited – enjoy everything with one account. It's the perfect fit for a life full of entertainment.

1.Video Unlimited and Music Unlimited are not available in every market.
2.The number of tracks available by country varies.

Signature features

Sony Xperia™ U comes with a range of features as standard. Below is a summary of the key signature features.

Xperia™ Timescape™

The place to meet your friends

The Timescape™ application manages all your communication with one person in one place. You can effortlessly browse by category your Facebook™, Twitter™, email and text communications, as well as view your photos. Now everything is all together and in chronological order, so you don't have to open different applications to see what's going on.

Xperia™ Infinite button

Everything you want – from everywhere

Tap the infinite button in the Timescape™ application and smart filter each category of communication by person. For example, when viewing a text message from a friend in Timescape™, tap the infinite button to view a list of all chat messages with that friend.

Xperia™ Local connectivity

More control over your media

Using Xperia Local connectivity, you can exercise more control over how media files get transferred and stored. For example, you can select MTP mode to transfer files if you want to limit the risk of data corruption or select MSC mode if you want to have more control over the data storage.

Xperia™ Home screen application

The place you call Home

Customise your Home screen with widgets, shortcuts, folders, themes, wallpaper and other items. Where’s best for you? Email top right? Music player bottom left? You decide. With four extensions to your Home screen, you’ve got plenty of space to put things where you want. Just remember to flick left or right to find them.

Facts – dimensions, weight, performance and networks[1]

Operating system	Google™ Android™ 2.3 (Gingerbread)
Processor	1 GHz NovaThor™ U8500 Dual-core Cortex A9
GPU	ARM Mali-400
Size	112 x 54 x 12 mm
Weight	110 grams
Available colours	Black White
Main screen	
Colours	16,000,000 colour TFT
Resolution	854x480 pixels
Size (diagonal)	3.5 inches
Scratch-resistant	Yes – anti-reflection coating on mineral glass
Input mechanisms	
Text input	On-screen QWERTY keyboard
Touch screen	Capacitive (multi-touch)
Touch gesture	Yes – multi-touch, up to 4 fingers supported
Memory	
RAM	512 MB
System memory	2 GB
Phone memory	2 GB
Internal storage	4 GB
Camera	
Camera resolution	5 megapixel
Digital zoom	16x
Photo flash	Yes – LED
Video recording	Yes – HD 720p
Video chat camera	Yes
Sensors	
Accelerometer	Yes

1.Performance metrics measured under laboratory conditions

Proximity sensor	Yes
Ambient light sensor	Yes
Magnetometer	Yes – Compass
Networks	
ST25a	UMTS HSPA 850 (Band V), 1900 (Band II), 2100 (Band I) GSM GPRS/EDGE 850, 900, 1800, 1900
ST25i	UMTS HSPA 900 (Band VIII), 2100 (Band I) GSM GPRS/EDGE 850, 900, 1800, 1900
Data transfer speeds	
GSM GPRS	Up to 107 kbps (download). Up to 85.6 kbps (upload)
GSM EDGE	Up to 296 kbps (download). Up to 236.8 kbps (upload)
UMTS HSPA cat 6 (upload)	Up to 5.76 Mbps
UMTS HSPA cat 10(download)	Up to 14.4 Mbps
Talk time (GSM)	Up to 6 hours and 36 minutes*
Standby time (GSM)	Up to 260 hours*
Talk time (UMTS)	Up to 5 hours and 36 minutes*
Standby time (UMTS)	Up to 472 hours*
Music listening time	Up to 45 hours
Video playback time	Up to 5 hours
Battery	1320 mAh, typical 1290 mAh, minimum

** Values are according to GSM Association Battery Life Measurement Technique as performed in controlled laboratory conditions. Actual time may vary.*

***NOTE**: Battery performance may vary depending on network conditions and configurations, and phone usage.*

Categorised feature list

Camera
3D Sweep panorama™
5 megapixel camera
16x digital zoom
Auto focus
Face detection
Flash/Photo flash
Flash/Photo light
Front-facing camera (VGA)
Geotagging
HD video recording (720p)
Red-eye reduction
Self-timer
Send to web
Sweep Multi Angle
Sweep panorama™
Video light
Video recording

Music
Album art
Bluetooth™ stereo (A2DP)
Clear bass
Clear stereo
Manual equalizer
Music Player
PlayNow™ service*
SensMe™
TrackID™ music recognition*
xLoud™

Internet
Google Play™
Bookmarks
Google™ search*
Google Voice™ Search*
Google Maps™ for Mobile with Street view and Latitude™*
NeoReader™ barcode scanner
Web browser (WebKit™)

Communication
Call list
Conference calls
Facebook™ application*
Facebook inside Xperia™
Google Talk™ application*
Noise suppression
Xperia™ Timescape™
Skype™
Speakerphone
Twitter™ (Timescape™ integration)*
Video chat ready

Messaging
Conversations
Email
Google Mail™*
Instant messaging
Multimedia messaging (MMS)
Predictive text input
Sound recorder
Text messaging (SMS)
Gesture input
Voice input

Design
Auto rotation
Keyboard (on-screen, QWERTY)
Picture wallpaper
Reality Display with Sony Mobile BRAVIA® Engine
Screenshot capturing
Touch screen
Live Wallpaper

Entertainment

Media browser
Radio (FM radio with RDS)
Sony Entertainment Network*
Video streaming
YouTube™*

Organiser

Alarm clock
Calculator
Calendar
Airplane mode
3D Album
Infinite button
Contacts
Setup guide
Stopwatch
Timer

Connectivity

3.5 mm audio jack (CTIA)
aGPS*
Bluetooth™ wireless technology
DLNA Certified®
Media Transfer Protocol support
Micro USB support
Modem
Native USB tethering
Media Go™*
Synchronisation via Microsoft® Exchange ActiveSync®
USB High speed 2.0 support
USB mass storage
USB Host
Wi-Fi®
Wi-Fi® Hotspot functionallity
Wisepilot™ turn-by-turn navigation*

** This service is not available in all markets.*

Technologies in detail

NOTE: The information outlined below is general and levels of compliance to standards and specifications may vary between products and markets. For more information, contact Sony Developer World or your Sony contact person where applicable.

Device-to-device communications (local)

Bluetooth™ wireless technology

Bluetooth™ profiles supported	Advanced Audio Distribution Profile v1.2 Audio/Video Remote Control Profile v1.0 Handsfree Profile v1.5 Headset Profile v1.1 Object Push Profile v1.1 Phonebook Access Profile v1.0
Core version and supported core features	3.0
Connectable devices	Products which support at least one of the profiles above.

More information:

www.sonymobile.com/developer

www.bluetooth.com

Wi-Fi®

Supported standards	IEEE 802.11b/g/n and Wi-Fi®
Connectable devices	Wi-Fi access points
Frequency band	2.4 GHz
Data transfer rate	Up to 72 Mbit/s
Security	WEP 64 bit WEP 128 bit TKIP CCMP (AES) Open Authentication Shared Authentication EAP-SIM EAP-TLS EAP-TTLS/MSCHAPv2 PEAPv0/EAP-MSCHAPv2 PEAPv1/EAP-GTC WPA Personal and WPA2 Personal WPA Enterprise and WPA2 Enterprise
Encryption	WEP, TKIP and AES
Power save	WMM-UAPSD QoS, WMM

DLNA Certified® (Digital Living Network Alliance)

Supported Device Classes	**M-DMS – Mobile Digital Media Server** Media Types: Image, Video and Music Summary: The digital media server exposes the media files in your phone to a Wi-Fi® network. The files can then be accessed from other DLNA Certified® clients. **+PU+** Media Types: Image, Video and Music Summary: Play media saved in the phone on another device, such as TV orcomputer, using 2 box push technology. The feature +PU+ is integrated in Gallery application and Music application. **M-DMP – Mobile Digital Media Player** Media Types: Image, Video and Music Summary: Play content stored on another device, for example a server or a PC, directly on the phone.
Supported Bearers	Wi-Fi®
DRM Support	The Sony DLNA Certified® implementation does not support DRM-protected content.

Messaging

MMS (Multimedia Messaging Service)

According to OMA Multimedia Messaging Service v1.0 + SMIL

Email

Bearer type (IP)	GPRS, EGPRS, UMTS
Character sets	BIG5 Traditional Chinese GB18030 ISO-2022-JP Japanese ISO-8859-1 ISO-8859-2 Eastern Europe ISO-8859-5 Cyrillic ISO-8859-7 Greek ISO-8859-9 Turkish ISO 8859-11 KOI8-R Cyrillic Shift_JIS Japanese USASCII UTF-16 UTF-8 Windows® 874 Windows® 1251 Cyrillic Windows® 1252 Windows® 1254 Turkish Windows® 1258 Vietnamese
Protocols	POP3 and IMAP4
Push email	Microsoft® Exchange ActiveSync® (EAS)
Secure email	SSL/TLS, both port methods (POPS/IMAPS) and START-TLS
HTML mail	Yes (read only)

More information:

www.sonymobile.com/developer

www.openmobilealliance.org

Positioning – location based services

Supported standards:

- OMA Secure User Plane Location (SUPL) v2.0
- 3GPP™ Control Plane location (incl. Emergency location)

Supported satellite systems:

GPS

Provisioning (OMA CP)

OMA CP version 1.1

Multimedia (audio, image and video)

Audio Playback	**Decoder format**	**Supported in file format**
	Audio decoding MPEG-1/2/2.5, audio layer 3	MP3 (.mp3)
	AAC, AAC+, eAAC+	3GPP (.3gp), MP4 (.mp4, .m4a)
	AMR-NB, AMR-WB	3GPP (.3gp)
	General MIDI (GM)	SMF (.mid)
	Linear PCM 16bit	WAV (.wav)
	OTA	OTA (.ota)
	Ogg vorbis	Ogg vorbis (.ogg)
Audio Recording	**Encoder format**	**Supported in file format**
	AMR-NB, AMR-WB	3GPP (.3gp), MP4 (.mp4), AMR (.amr)
	AMR-NB, AMR-WB, AAC-LC stereo, sample rate 48 kHz bit rate 128 kbps	3GPP (.3gp), MP4 (.mp4)
Image Playback	**Decoder format**	**Supported in file format**
	1, 4, 8, 16, 24 and 32 bpp and RLE encoded formats	BMP (.bmp)
	Single and multi-frame, bitmap mask support (GIF87a format and GIF89a format)	GIF (.gif)
	Joint Photographic Experts Group	JPEG (.jpg)
	Portable Network Graphics Bitmap mask support	PNG (.png)
	Wireless Bitmap	WBMP (.wbmp)
Image Capture	**Encoder format**	**Supported in file format**
	Joint Photographic Experts Group	JPEG (.jpg)
Video Playback	**Decoder format**	**Supported in file format**
	MPEG-4 Visual Simple Profile Level 6, Advanced Simple Profile Level 5	3GPP (.3gp), MP4 (.mp4)
	H.264 High Profile Level 3.2	3GPP (.3gp), MP4 (.mp4)
	H.263 Profile 0, Level 70	3GPP (.3gp)

Video Recording	Encoder format	Supported in file format
	Video H.263 Profile 0, H.264 Baseline Profile Audio: AAC-LC stereo, sample rate 48 kHz bit rate 128 kbps, AMR-NB	3GPP (.3gp), MP4 (.mp4)
Audio/Video Streaming	Streaming transport	RTSP according to 3GPP™ HTTP streaming
DRM	DRM (Digital Rights Management) – features the rights and copy protection of downloaded content	OMA DRM 1.0

Synchronisation (OMA DS, EAS, Google Sync™)

OMA Data Synchronisation protocol versions 1.1.2 and 1.2

OMA Data Formats: vCard 2.1, vCalendar 1.0

Microsoft® Exchange ActiveSync® protocol version 2.5

Microsoft® Exchange ActiveSync® protocol version 12

Microsoft® Exchange ActiveSync® protocol version 12.1

Google Sync™

Related information:

www.sonymobile.com/developer

Web browser

Browser version	Android 2.3 Browser (Based on WebKit)
Navigation/rendering	Adobe™ Flash™ 11* Full page PC rendering Landscape/portrait rendering Pan & Zoom
Search	Internet Search
Browser compliancy	CSS 2.0 CSS 2.1 CSS 3.0 DOM 2.0 DOM 3.0 HTML version 4.0 HTML version 5.0 JavaScript 1.7/ECMA-script 262 3rd edition WebGL 1.0 XHTML Basic version 1.0 XHTML 1.1
Supported Device API	Geo-location API
Protocol compliancy	Gzip HTTP/1.1 OMA Download 1.0 TLS 1.0 and SSL 3.0

** Updates are distributed via Android market™.*

Related information:

www.sonymobile.com/developer

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